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PHILOSOPHICAL
TRANSACTIONS

OF THE

ROYAL SOCIETY

OF

LONDON.

FOR THE YEAR MDCCCLXVII.

VOL. 157.

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MDCCCLXVIII.

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MDCCCLXVII.

ADVERTISEMENT.

THE Committee appointed by the *Royal Society* to direct the publication of the *Philosophical Transactions*, take this opportunity to acquaint the Public, that it fully appears, as well from the Council-books and Journals of the Society, as from repeated declarations which have been made in several former *Transactions*, that the printing of them was always, from time to time, the single act of the respective Secretaries till the Forty-seventh Volume; the Society, as a Body, never interesting themselves any further in their publication, than by occasionally recommending the revival of them to some of their Secretaries, when, from the particular circumstances of their affairs, the *Transactions* had happened for any length of time to be intermitted. And this seems principally to have been done with a view to satisfy the Public, that their usual meetings were then continued, for the improvement of knowledge, and benefit of mankind, the great ends of their first institution by the Royal Charters, and which they have ever since steadily pursued.

But the Society being of late years greatly enlarged, and their communications more numerous, it was thought advisable that a Committee of their members should be appointed, to reconsider the papers read before them, and select out of them such as they should judge most proper for publication in the future *Transactions*; which was accordingly done upon the 26th of March 1752. And the grounds of their choice are, and will continue to be, the importance and singularity of the subjects, or the advantageous manner of treating them; without pretending to answer for the certainty of the facts, or propriety of the reasonings, contained in the several papers so published, which must still rest on the credit or judgement of their respective authors.

It is likewise necessary on this occasion to remark, that it is an established rule of the Society, to which they will always adhere, never to give their opinion, as a Body, upon any subject, either of Nature or Art, that comes before them. And therefore the

thanks, which are frequently proposed from the Chair, to be given to the authors of such papers as are read at their accustomed meetings, or to the persons through whose hands they received them, are to be considered in no other light than as a matter of civility, in return for the respect shown to the Society by those communications. The like also is to be said with regard to the several projects, inventions, and curiosities of various kinds, which are often exhibited to the Society; the authors whereof, or those who exhibit them, frequently take the liberty to report and even to certify in the public newspapers, that they have met with the highest applause and approbation. And therefore it is hoped that no regard will hereafter be paid to such reports and public notices; which in some instances have been too lightly credited, to the dishonour of the Society.

The Meteorological Journal hitherto kept by the Assistant Secretary at the Apartments of the Royal Society, by order of the President and Council, and published in the Philosophical Transactions, has been discontinued. The Government, on the recommendation of the President and Council, has established at the Royal Observatory at Greenwich, under the superintendence of the Astronomer Royal, a Magnetical and Meteorological Observatory, where observations are made on an extended scale, which are regularly published. These, which correspond with the grand scheme of observations now carrying out in different parts of the globe, supersede the necessity of a continuance of the observations made at the Apartments of the Royal Society, which could not be rendered so perfect as was desirable, on account of the imperfections of the locality and the multiplied duties of the observer.

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Cape of Good Hope.	Liverpool.
Dublin.	Madras.
Edinburgh.	Oxford (Radcliffe).
Greenwich.	

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	Geological Society.
	Geological Survey of Great Britain.
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	Radcliffe Library.
Swansea	Royal Institution.
Sydney	University Library.
Woolwich	Royal Artillery Library.

Argentine Republic.

Buenos Ayres	Museo Publico.
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Belgium.

Brussels	Académie Royale de Médecine.
	Académie Royale des Sciences.

Denmark.

Copenhagen	Kongelige Danske Videnskabernes Selskab.
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France.

Montpellier	Académie des Sciences et Lettres.
	Faculté de Médecine.
Paris	Académie des Sciences de l'Institut.
	Dépôt de la Marine.
	Ecole des Mines.
	Ecole Normale Supérieure.
	Jardin des Plantes.
	Société Entomologique.
	Société de Géographie.
	Société Géologique.
	Société d'Encouragement pour l'Industrie Nationale.
Toulouse	Académie Impériale des Sciences.

Germany.

Altona	Die Sternwarte.
Berlin	Königliche Akademie der Wissenschaften.
	Physikalische Gesellschaft.
Brünn	Naturforschender Verein.
Danzig.....	Naturforschende Gesellschaft.
Dresden	Kaiserliche Leopoldino-Carolinische deutsche Akademie der Naturforscher.
Frankfort	Senckenbergische naturforschende Gesellschaft.
Giessen.....	Grossherzogliche Universität.
Göttingen.....	Königliche Gesellschaft der Wissenschaften.
Gratz	Naturwissenschaftliche Verein für Steiermark.
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Munich.....Königliche Bayerische Akademie der Wis-
senschaften.
PragueKönigliche böhmische Gesellschaft der
Wissenschaften.
ViennaKaiserliche Akademie der Wissenschaften.
Geologische Reichsanstalt.
Würzburg.....Physikalisch-medicinische Gesellschaft.

Hungary.

PesthÁ Magyar Tudós Társaság—Die Ungarische
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Italy.

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CataneaAccademia Gioenia di Scienze Naturali.
FlorenceReale Museo di Fisica.
MilanReale Istituto Lombardo di Scienze, Let-
tere ed Arti.
Modena.....Società Italiana delle Scienze.
NaplesSocietà Reale, Accademia delle Scienze.
PalermoAccademia di Scienze e Lettere.
RomeAccademia Pontificia de' Nuovi Lincei.
Osservatorio del Collegio Romano.
TurinReale Accademia delle Scienze.
VeniceI. R. Istituto Veneto di Scienze, Lettere
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Wetenschappen.

Netherlands.

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delijke Wijsbegeerte.

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Russia.

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MoscowSociété Impériale des Naturalistes.
Le Musée Publique.
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St. PetersburgAcadémie Impériale des Sciences.

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Sweden and Norway.

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TrondhjemKongelige Norske Videnskabers Selskab.
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Samhälle.
Stockholm.....Kongliga Svenska Vetenskaps-Akademie.

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The *fifty* Foreign Members of the Royal Society.

A List of Public Institutions and Individuals, entitled to receive a Copy of the Astronomical Observations (including Magnetism and Meteorology) made at the Royal Observatory at Greenwich, on making application for the same directly or through their respective agents, within two years of the date of publication.

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 President of the Royal Society London.
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A List of Observatories, Institutions and Individuals, entitled to receive a Copy of the
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Lisbon	Senhor da Silveira.
Marburg	Prof. C. L. Gerling.
Prague	K. Jelinek.
Stockholm	Professor H. Selander.
St. Petersburg	(Twelve copies for distribution to the Russian Mag. and Met. Obs.) The Compass Observatory, Capt. Belavenetz.
Toronto	Professor Kingston.
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London	House of Lords, Library. House of Commons, Library. King's College. Royal Society. University College, Library. Meteorol. Office, Board of Trade.
Paris	Meteorological Society.
St. Bernard	Convent.
Washington	Smithsonian Institution.
Woolwich	Office of Mag. and Met. Publication.

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Sabine, Lieut.-General, R.A. .	London.
Souza, Senhor da	Coimbra.
Wartmann, Prof. Elie	Geneva.
Younghusband, Col., R.A.	Woolwich.

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VOL. 157.—PART II.

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MDCCCLXVIII.

ADJUDICATION of the MEDALS of the ROYAL SOCIETY for the year 1867 by
the PRESIDENT and COUNCIL.

THE COPLEY MEDAL to KARL ERNST VON BAER, of St. Petersburg, For. Mem. R.S., for his discoveries in Embryology and Comparative Anatomy, and for his Contributions to the Philosophy of Zoology.

A ROYAL MEDAL to MESSRS. JOHN BENNET LAWES, F.R.S., and Dr. JOSEPH HENRY GILBERT, F.R.S., for their Researches in Agricultural Chemistry.

A ROYAL MEDAL to Sir WILLIAM EDMOND LOGAN, F.R.S., for his Geological Researches in Canada, and the Construction of a Geological Map of that Colony.

THE BAKERIAN LECTURE was delivered by FREDERICK AUGUSTUS ABEL, F.R.S.; it was entitled "Researches on Gun-cotton.—Second Memoir. On the Stability of Gun-cotton."

THE CROONIAN LECTURE was delivered by Dr. J. BURDON SANDERSON; it was entitled "On the Influence exercised by the Movements of Respiration on the Circulation of the Blood."

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